

Edgar Wherry in Pennsylvania

JOHN M. FOGG, JR.*

Edgar Theodore Wherry was born in Philadelphia on September 10, 1885, and received his education at Friends Central School and the University of Pennsylvania. After teaching at Lehigh University from 1908 to 1913 and working in Washington, D.C. for seventeen years, he returned in 1930 to the city of his birth and has resided there ever since.

Long before he returned to Philadelphia to live, local botanists became acquainted with Dr. Wherry. Since his family resided in this city, it was his habit to spend the Christmas holidays with them. This led to his being invited to speak at the December meeting of the Philadelphia Botanical Club, an organization which had been founded in 1891.

The earliest of his lectures which I can remember was in 1921, when his topic was "Our Native Plants and their Soil Preferences." From that time on for many years, with only a few exceptions, his December presentation was an annual feature of the Club's programs, and we were favored with lectures on ferns, orchids, pitcher plants, heaths and heathers, and of course, *Phlox* at the time when our speaker was preparing his monograph on that genus. All of his talks were illustrated with handcolored slides.

In 1930 Dr. Wherry joined the faculty of the Department of Botany of the University of Pennsylvania, where he taught until his retirement in 1955. He had already made substantial contributions to our knowledge of soils, had perfected a colorimetric method for determining soil pH, had investigated the remarkable stand of box huckleberry (*Gaylussacia brachycera*) in Perry County, Pa., and had published an account of the "Wild Flowers of Mount Desert Island, Maine."

In 1918, while still employed by the Bureau of Chemistry in the U.S. Department of Agriculture, Wherry became a member of the American Fern Society. He was president of that organization from 1934 through 1938 and was the author of many articles in the "American Fern Journal." He assigned the royalties from his popular "Fern Guide" to the Society. This is entirely typical of the selflessness of the man. Today he is deservedly an Honorary Member of the Society.

In 1932 the University of Pennsylvania inherited the property which became the Morris Arboretum. Dr. Rodney H. True, who was then Chairman of the Department of Botany, assigned four members of his staff on a part-time basis to administer the project, and Wherry was appointed ecologist. One of his first tasks was to conduct a detailed soil survey of the grounds. This revealed that within some 175 acres there was a wide diversity of soil types. The ridge which traverses the property from east to west is composed of quartzite which, being a metamorphosed sandstone, weathers slowly to produce an acid soil. On the south slope this gives way to circum-neutral soils derived from schistose rocks, while northward the underlying formation is Cambro-Ordovician limestone, a distinctly alkaline soil. With this information in hand, it was possible to develop planting

*Arboretum of the Barnes Foundation, Merion, PA 19066.

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plans in a scientific manner, making certain that each family or genus was established on soils with which it was compatible.

In 1934 the Bowman's Hill State Wild Preserve was established with the aid of the Works Progress Administration. This preserve, which is located near New Hope in Bucks County, Pa., is dedicated to the growing and preservation of plants native to the Commonwealth. With Wherry's deep-seated interest in wild flowers it was inevitable that he should be attracted to this project, and in 1935 he became one of the Founders. For a time he was Chairman of the Preserve and has been one of its botanical advisors for 41 years. The Wherry Fern Trail was one of the first trails to be developed at the Preserve and appropriately commemorates Dr. Wherry's dedication to that group of plants.

In the mid 1930's, work was begun in earnest on a state Flora at the University of Pennsylvania. The Department of Botany had purchased a twenty-passenger bus to transport students between the campus and the arboretum, and each spring, as soon as classes were over, we rounded up half a dozen or so of our abler students, loaded up the bus with presses, driers, and collecting papers, and set off on a week's botanizing trip. During several summers we moved from east to west across the northern tier of Pennsylvania counties, combing every available habitat. We hoped eventually to cover the entire state. Frequently we returned to the area later in the season to collect fruiting material. From each of these trips thousands of herbarium specimens were brought back to be incorporated into our records and finally to appear as dots on our outline maps of the state. Edgar Wherry participated in many of these trips, and his knowledge of geology, geography, and the more interesting wild flowers made him a valuable member of the party.

Enthusiastic field man that he was (and at the age of 90-plus still is), he always welcomed the prospect of a collecting expedition. I recall with much pleasure a foray on which I accompanied him across Pennsylvania in the fall of 1940. We drove through Cameron, Elk, Jefferson, and Armstrong counties, stopping frequently to collect. After visiting the extreme southwestern corner of the state, we came back through Fayette County, stopping near Elliottsville to collect *Clethra acuminata* at what was then its only known station in Pennsylvania. We could almost look across the state line into Maryland, but there was no doubt about it—the *Clethra* was definitely in Pennsylvania, although it is not so recognized in the eighth edition of "Gray's Manual."

Next we visited Ohiopyle, in the same county, where several genera such as *Boykinia* and *Marshallia* are at or near the northern limits of their range. Continuing eastward, we stopped at a locality southwest of Reels Corners to collect that unique sedge *Cymophyllus fraseri* at one of its few known stations in the state. Each of us brought back from this brief trip about 400 numbers (many of them in replicate), which added a significant number of records to our study.

On another occasion a friend of mine offered us the use of his hunting lodge near Bradford in McKean County in the extreme northern portion of the state. My wife and I, accompanied by Wherry and Joseph W. Adams, who was then on the staff of the Morris Arboretum, spent five days in a lovely spot scouring the coun-

tryside, with the result that we brought back nearly a thousand numbers from an area that was almost entirely unknown botanically. I mention these two trips merely as an indication of Edgar Wherry's active interest in the Flora project and his willingness to drop anything he might be doing in order to participate in the field work.

In 1941 I accepted an appointment as Dean of the College of Arts and Sciences at the University, having been assured that my duties would not seriously affect my work on the Flora. Of course, no one at that time knew that soon the country would be at war and that afterward there would be a lengthy period of readjustment affecting all educational institutions. The result was that for twelve years I was able to devote very little time to the project. It might have been necessary to abandon it altogether, had not Wherry stepped in and assumed the responsibility for continuing it.

Fortunately, also, at this juncture I was able to enlist the cooperation of my friend and colleague, Dr. Herbert A. Wahl, Professor of Botany at Pennsylvania State University. On three separate occasions during my involvement in administrative duties, Herb was able to obtain a year's leave of absence from Penn State and to come to Philadelphia to work with Wherry on the Flora. I joined them whenever possible, but my appearances were few and far between.

The various techniques adopted for handling our multitudinous records have been described in detail elsewhere, and need be mentioned only briefly here. Most of them were devised by the late Dr. J. R. Schramm, formerly Chairman of the Department of Botany, to whom tremendous credit is due for his support of the Flora project.

Once the thousands of specimens of Pennsylvania plants we collected had been mounted, it was necessary for their identifications to be authenticated before they were ready to be recorded and mapped. In this operation Dr. Wherry assumed responsibility for such groups as the pteridophytes, orchids, Ericaceae, Polemoniaceae, and a few others. Herb Wahl, a recognized authority on *Carex* (our state's largest genus), worked with the entire Cyperaceae, as well as the very difficult genus *Potamogeton* and many of the apopetalous families. I took over *Juncus* and most of the Sympetalae, and in this manner there gradually evolved a division of labor, with Wherry taking more and more groups as time went by and my association with the project decreased.

After the name on a given specimen was authenticated, it was entered on a master record card that listed the state's 67 counties. The exact locality at which each specimen was collected was then entered, in carbon-base ink, under its appropriate county, together with name of the collector, his number or date of collection, and a symbol indicating the herbarium in which the sheet had been examined. The last was thought to be of value since, in addition to incorporating about 100,000 specimens in our own herbarium, we attempted to record all of the Pennsylvania material in the Philadelphia Academy of Natural Sciences, the Carnegie Museum in Pittsburgh, the State Museum in Harrisburg, and the herbarium at Pennsylvania State University. Probably no other state Flora has ever been based on such a tremendous number of specimens.

The final step in the procedure was to place on an outline map of the state for each species a dot representing each entry on the record cards. Accuracy is of great importance because the state includes diverse physiographic provinces, such as the coastal plain, the piedmont, the valley and ridge province, and the Appalachian plateau. The state is also traversed by the terminal moraines of two recent glaciations. From almost the very beginning of the undertaking this has been Edgar Wherry's sole responsibility. There is probably not a town, village, or hamlet in the Commonwealth of Pennsylvania for which he does not know the exact location. Needless to say, we have disregarded all specimens with vague data and have recorded only those giving precise information.

Of the more than 3000 species of higher plants which occur in Pennsylvania, about 800 are introduced, either from abroad or from other sections of the United States. Of those which are native, the majority are widespread, occurring in every or almost every county (*Fig. 1*). Others have a more limited distribution, being either predominantly northern, or southern, or on the coastal plain, or components of the Ohio River vegetation. Still others might be found only on particular soils, such as limestone (*Fig. 2*), serpentine, or shale barrens. As Wherry's carefully placed dots began to fill in the map-cards, often several hundred for each species, these correlations became abundantly evident.

Another fact which emerged was that in countless instances species were totally lacking from counties where they might be expected to be common. Wherry then began making "Wanted Lists" for each county. If he knew of an active collector in one of these counties, he would send him a list and urge him to collect. More often than not he would execute this commission himself, spending days in a given county to collect the plants which had been neglected by other botanists. Usually these were common plants, for all too frequently rare or spectacular species are collected at the expense of more familiar ones.

Another by-product of the maps is species lists for given counties, which Wherry has compiled. Several lists have already been published in "Bartonia," the official journal of the Philadelphia Botanical Club. They are the basic bricks of which state and regional Floras are constructed.

It was the original intention that the Flora of Pennsylvania should be biologically oriented and contain diagnostic keys, brief descriptions, and interpretive information concerning distribution, which would elevate it above the level of a mere checklist. To that end, Edgar Wherry, Herb Wahl, and I prepared hundreds of pages of manuscript. Unfortunately, Wahl's increasing preoccupation in monographing *Chenopodium*, his recent untimely death, and my increasing involvement in administrative duties reduced this objective to a rather forlorn hope. Also, the cost of publishing such a work, plus our many hundreds of range maps, would have been almost prohibitive.

It is a pleasure, however, to report that our manuscript, incomplete though it is, has been turned over to Dr. Carl Keener of the Department of Botany at Pennsylvania State University. Carl feels that it may be possible to put it in shape for publication, and if he does, Wherry's treatments of the ferns, orchids, phlox, etc. will constitute a substantial contribution.

As matters stand at present, only the maps, in the form of an "Atlas," are scheduled for publication at an early date. It is unlikely that anyone examining these maps will gain any real insight into the forty years of field work and herbarium study which underly them, but I hope it has been made clear that to a large degree their publication is due to the indomitable energy of one very versatile and energetic individual.

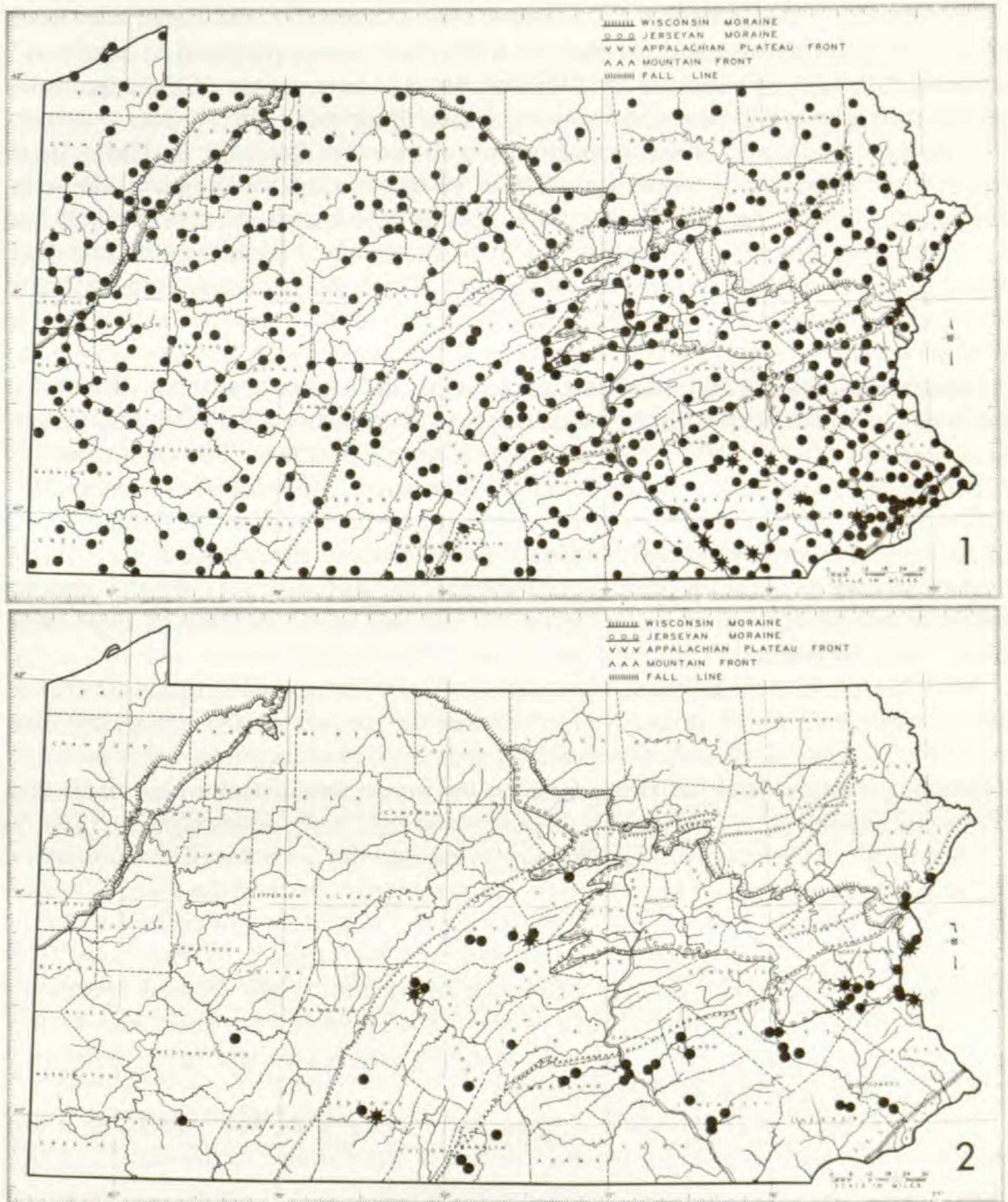


FIG. 1. Pennsylvania range of *Polystichum acrostichoides*. FIG. 2. Pennsylvania range of *Asplenium cryptolepis*.

In the meantime, from 1941 to 1950 and again from 1953 to 1957, Dr. Wherry served as a member of the faculty of the School of Botany, Horticulture and Landscape Architecture of the Arboretum of the Barnes Foundation. This school had been established in 1940 by Mrs. Laura L. Barnes, Director of the Arboretum, and the courses offered at her invitation by Wherry during these two intervals included geology, soils, ecology, and plant physiology. His emphasis at all times was on the out-of-doors, where the study of botany truly belongs.

In 1972 the officers of the Delaware Valley Chapter of the American Rock Garden Society approached the Barnes Arboretum with a proposal to establish a small rock garden in honor of Dr. Wherry. He had been editor of their quarterly publication for several years and is today Editor Emeritus. The chapter proposed to construct this garden if the arboretum would provide space for it. Today there exists on a south-facing slope a plot 75 × 10 feet named the Edgar T. Wherry Memorial Garden. In this garden grow only plants which Wherry himself has selected. They are either species which have been named for him (such as *Silene wherryi* and *Tiarella wherryi*) or those with which he has had some intimate association, either as discoverer, introducer into cultivation, or author, as in several species of *Phlox*.

Another interesting feature of this garden is its ecological character. The soil at the western end is derived from sandstone and is therefore acid. This is followed by a section of flaky shale, which produces a neutral reaction. The eastern end is rendered circum-neutral by the addition of limestone chips. Needless to say, this dramatic demonstration of the correlation between plant species and soil types is of considerable interest to both students and visitors to the arboretum.

At least one day a week throughout the growing season, Edgar Wherry may be found in his garden, weeding, mapping, or planting specimens which have been sent to him by friends from many sections of the country.

Mrs. Barnes had always been interested in hardy ferns, and in the two acres of native woodland which occupy the southwestern corner of the arboretum had assembled a collection of about a hundred species, including some rather rare and interesting exotics, such as *Dryopteris erythrosora*, *Arachniodes standishii* and *Osmunda japonica*.

During the summer of 1975 Dr. Wherry suggested that a fern trail be established in these woods in honor of Mrs. Barnes. He personally checked the identifications of all of the species, new plastic labels giving the botanical and common names were made, directional arrows were installed, and the Laura L. Barnes Fern Dell became a reality. It has already been visited by the newly formed Delaware Valley Fern Society, of which Edgar Wherry is an honored member, and we are confident that it will prove a valuable teaching adjunct as well as a feature of interest to others who visit the arboretum.

Botanists here and elsewhere—especially members of the American Fern Society—may well be grateful for the “return of the native” to the state and city of his birth.